ity consumption is calculated as an average of Danish, Finnish, Swedish and Norwegian electricity production, or whether it is assumed that Denmark is a market in itself (which is often seen in life cycle assessments). If we choose to look at the average for Denmark, which is *not* a closed market, it is decisive whether the average is calculated from the Danish production alone or whether you take into account the exchanges with the neighbouring markets, and *how* you take this into account, e.g. whether you calculate with Danish production plus import-mix (in periods with much available water-power in Norway and Sweden), with Danish production plus import-mix minus export-mix (in periods with little water power available) or just Danish production plus net import/export (thus disregarding transit-trade). For Switzerland, having a large degree of transit-trade, Ménard et al. (1998) have shown how such different assumptions affect the average from 21 g CO_2 (Switzerland's own production) over 140 g CO_2 (Switzerland plus import minus export) to 500 g CO_2 (UCPTE average, in that UCPTE can be regarded as a relatively isolated electricity market like the Nordic). ·The recommendation of Ménard et al. (1998) is to use the model that disregards transit-trade (48 g CO_2) with the argument that this best reflects the

actual market conditions. It should be clear from this example that averages can be highly debatable, and possible arguments for preferring one average over the other is actually often market-based. This may in itself be regarded as a serious argument for taking the full consequence, and use a truly market-based system delimitation instead of the average approach.

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JLCA Corner

The Progress of the Database Study Committee in the National LCA Project of Japan

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The National LCA Project of Japan has previously been introduced in this corner [1,2,3]. There are mainly three study committees (Inventory, Database and Impact Assessment Study Committees) in this project. The Progress of Impact Assessment Study Committee [2] and Inventory Study Committee WG2 [3] have been reported. In this article, I'd like to introduce the activity of the Database Study Committee.

The Database Study Committee is made up of LCA practitioners and LCA software developers as its members and is actively working with the aim of completing an LCA public database system in Japan which might accomplish the following tasks with ease:

(1) Construction of a database for data to be accumulated by the Inventory Study Committee,
(2) smooth supply of the data to users through the Internet,
(3) appropriate maintenance and management of data including updating.

In 1998, a study on data format and development of the LCA database system was started.

In the field of data formats, an LCA data format suitable for this project was studied in consideration of data formats proposed for existing LCA software, an SPOLD format, requirements under ISO 14040 and 14041, and proposals made by the other study committees. As a result, the basic specification of the data format was determined. This format will be refined further, incorporating new proposals discussed by the other study committees and the data format studied by the ISO.

The LCA database system has data input software, a database server and a data supply server as its main components. The data input software was developed to support the data input by LCA practitioners based on the LCA data format mentioned above. This software has the following functions:

(1) Data input functions: input data to express the product system configuration and inventory data.
(2) Dictionary maintenance function: with respect to official names assigned to certain industry classification codes; this system registers the original name used by each industry and company as an alias.

The database server stores the collected LCA data and returns results in response to requests for search and data supply via the data supply server mentioned below. The basic functions as a database server were developed and the functions were verified in 1998. The data supply server is accessed directly by LCA data users when collected LCA data is published through the Internet. In 1998, the interface with the database server was developed. Construction of an interface with database users and of functions for database managers is scheduled in 1999. After completing the foregoing design, the database test manufacture and test run, will be used as a prototype of the LCA database system for use in work to enhance completeness after 2000 where test runs using actual data will be employed.

One system development challenge for the proposed database system is the necessity for ideas to meet specification changes flexibly since LCA data format changes are anticipated and the possibility of changes in the specifications of the entire system is very high. Furthermore, a development schedule must be made for data input software so that software adjusted to the progress made by the Inventory Study Committee can be supplied.

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